## Assessing Home Care Agencies' Readiness for Telehealth George Demiris PhD, Timothy Patrick PhD, Naresh Khatri PhD Health Management and Informatics School of Medicine, University of Missouri-Columbia

Home healthcare is facing a set of challenging new realities in the 21<sup>st</sup> century such as funding limitations and increased life expectancy. Many believe that the use of telehealth enabling patients at home to interact with nurses at the clinical site using videoconferencing technology, will be a cost-effective solution to providing quality care services. Many agencies have adopted or are planning on implementing a telehealth solution. Level of agencies' readiness can lead to a lower level of risk, and a more successful innovation outcome. We developed a framework for assessing home care agencies' readiness for telehealth consisting of 35 items. This instrument can be used as a decision support tool for agencies that are about to implement a telehealth system as well as a formative or summative evaluation tool for agencies already utilizing telehealth.

Home healthcare (HHC) is a rapidly growing component of the current health system in the United States. More than 20,000 providers deliver home care services to approximately eight million individuals<sup>1</sup>. Annual expenditures for home health care were estimated to be \$41.3 billion in 20011. HHC has to face a series of factors that could threaten its viability such as increased life expectancy, population growth and funding limitations. "Telehealth" is viewed as a method of healthcare delivery that could address issues of cost, and limited access. The use of videoconferencing technology has the potential to decrease travel time and costs for nurses and increase the number of patients that an HHC nurse can interact with, in a given day. Such an interaction is called a 'virtual visit'. In 2000, the Prospective Payment System went into effect which apportions payment per episode of care (using 60 day periods), instead of payment for each visit allowing for home care agencies to integrate virtual visits within the care plan as they see fit. As a result, many home care agencies have already started or attempted to utilize telehealth technology as a cost-effective way to provide care.

The adoption of telehealth as a mode of care delivery bears challenges of training, providers' and patients acceptance, cost of investment, organizational and technical infrastructure, new visit documentation protocols, terminology and quality control mechanisms. In some cases this mode of delivery was found to be successful while in others issues were raised about difficulties in scheduling virtual visits, lack of training and supervision and limited commitment of the administrative staff <sup>2</sup>. A higher level of readiness leads to a lower level of risk, and a more successful innovation outcome.

We studied models of innovation readiness and focused on the Organizational information technology/ systems innovation readiness scale (OITIRS)<sup>3</sup>. We expanded the sub-dimensions

(resources, end-users, knowledge, processes, management structures, administrative support etc.) to address the specifics of telehealth in home care, namely not only staff but patient training, videomediated communication, remote monitoring, availability of guidelines and policies for patient selection and care plan design, definition of criteria for the appropriateness of a virtual visit and assignment of roles and responsibilities for the "virtual" aspect of care. The defined user groups are registered nurses, licensed practical nurses, nurse supervisors, therapists (PT/OT), social workers, physicians, administrators, home health aids and other.

The developed framework is intended both as a survey providing a total score (indicating level of readiness) but also a list of concepts that need to be addressed before and during the implementation of telehealth. It includes a total of 35 questions. This instrument is currently being tested in two home care agencies to address reliability and validity. It can serve both as a decision support tool for agencies that consider the option of integrating virtual visits but are uncertain of the level of readiness their agency has reached but also for designers of telemedicine solutions in home care.

## References

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